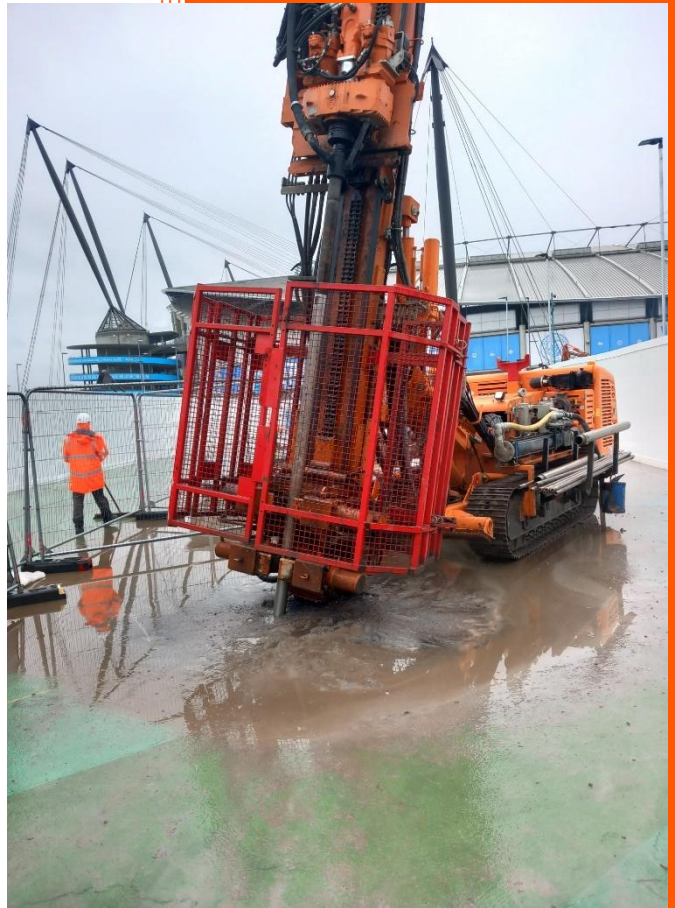


233575

Millwood School Extension



Factual Report

Probing, Locating, Drilling and Treatment for Shallow
Mine Workings

Van Elle
Summit Close
Kirkby-in-Ashfield
Nottinghamshire
NG17 8GJ
01773 580580

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Control Sheet

This report has been prepared for the sole benefit, use and information of Millwood School for the purposes set out in the instructions commissioning it. The liability of Van Elle Ltd in respect of the information contained in the report will not extend to any third party. It is now the client's responsibility to fulfil the Coal Authority's requirements with regards to the Coal Authority Permit.

Summary Table	
Factual Report for the probing and treatment of shallow workings beneath new proposed development at the Former Roseberry College Site.	
SITE	Millwood School Extension
CLIENT	Millwood School
DATE	October 2024
REFERENCE	VE233575

Development Proposal	ISG (now a defunct company), are to carry out the construction of a new education building at Millwood SEN School. NB. As of May 2025 Kier Construction have taken over construction. This report gives a factual account of the works carried out to investigate and if required treat shallow mine workings.
Geological Setting / Coal Mining Legacy	The site is underlain by the Pennine Middle Coal Measures consisting of interbedded Mudstones, Siltstones, Sandstones, and Coal. Superficial deposits consist of made ground and Glacial Deposits. Coal Authority deems the site to be High Risk for development due to the site historical mining environment.
Scope of Works	Due to the proposed end use of the site, i.e. School Building it is necessary to ensure that any residual risk from the site's mining past is mitigated and reduced. It would therefore be a requirement of the Local Authority and the Coal Authority that the mine workings are investigated and treated to prevent

	any potential surface instability in the future.
--	--

Conclusion	79 No. boreholes were drilled at the site to investigate and if required treat underlying shallow mine workings. All holes drilled did not record evidence of former shallow mine workings. All positions were backfilled with a 12:1 PFA: OPC grout mixed using a self powered grout pump.
Recommendations	Following investigation, it is considered that the risk of mine workings is negligible. As with all formerly mined sites, there is always a possibility of unknown mineshafts/bell pits/adits and previously formed crown holes being present on site. We would suggest that there is a watching brief whilst undertaking any excavation/earthworks on site and any changes in fill material or colour are noted and investigated

Prepared by	Paul Grocott MIMMM FGS	Signed 	Date 08/10/2024
Approved by	Dave Bourne	Signed 	Date 08/10/2024

Introduction

ISG Construction (ISG in their capacity as Principal Contractor (at the time of the works taking place), have instructed Van Elle (VE) to carry out the investigation and stabilisation of shallow workings beneath a newly proposed educational development.

The stabilisation was carried out by Drilling and Grouting, an industry wide term, used to describe the processes identified and described below.

The site is located off Millwood Lane and is part of the existing SEN School. As part of the pre-construction works a site investigation has been carried out, the result of which shows the potential for shallow mine workings. The site location is shown below on Figure 1.



Figure 1: Site plan

As part of the pre-construction phase of the redevelopment, a site investigation was commissioned to assess the land and to identify any risk posed by a former mining environment given the areas history.

The works were carried out by LK Group and reported within their Report reference: LKC 23 1383 dated September 2023, which concluded that the area could be at risk of historic shallow mine workings.

All works were carried out in line with recommendations given in CIRIA Publication 758D.

Methodology – Drill and Grouting

The works involved the drilling of 101mm/72mm diameter boreholes to access the underlying workings/geology to ascertain if treatment was required.

All works were carried out by a Casagrande C6 rotary percussive drill rigs, using water as the flushing medium to assist in the drilling through hard strata and to reduce the risk of releasing perched mine gases.

The crew set up the rig at the drilling location with the initial lengths of 101mm casing installed on the mast. The driller then commenced drilling and installed the first lengths casing into the ground. With the initial casing lengths installed, the driller split off the drill head from the casing, then raising the drill head to a suitable position for accepting the next length of the casing. This process was repeated until the casing reached rockhead, where it was socketed in to give a tight seal, thus preventing grout loss.

Once the casing was installed to rockhead and sealed, the smaller diameter drill rods (T38) were added to the mast and a 72mm drill bit fitted to drill down to the target seam.

Once the target seam had been reached and an open borehole achieved, the borehole was further cleaned out by moving the rods up and down on the mast, allowing any materials that had spalled into the borehole to be removed.

The entire drill string was then removed, and the borehole deemed complete and ready for grouting.

During the drilling process, accurate logs of depths, loss of flush, geology and any workings encountered were recorded. Logs attached and can be found in Appendix 1.

Grouting works commenced once there were enough holes drilled out within the treatment area to permit and accommodate the batching of a full grout mix with minimal wastage. Logs can be found attached in Appendix 2.

The grout consisted of a 12:1 PFA / OPC cementitious grout, mixed and injected through a 6-ton electric paddle mixer connected to an electric MAPP Grout pump. Grout was pumped to each borehole through a series of 3" and 2" Grout lines. All boreholes were grouted to surface.

Summary of Works Carried Out

In total 79 treatment boreholes were drilled to an average depth of c.50m below ground level (bgl).

Superficial Deposits (Over burden) was found to consist of made ground, Sand and Clay, which in turn was underlain by Sandstone, Dark Mudstone and Coal Bands.

There was no evidence of former workings, either in the form of voids and broken ground.

Conclusion

All positions drilled recorded solid geology in the form of mudstone / sandstone and coal bands with no evidence of former shallow workings.

All boreholes were back filled with a 12:1 PFA/OPC grout, with all boreholes were topped up to surface.

Van Elle are satisfied that the risk from former mine workings based on the evidence gleaned from the drilling and grouting exercise is negligible, and that the development can go ahead unhindered.

All boreholes were backfilled with a cementitious PFA / OPC grout to prevent backfill the soft potential workings any potential for coal bed gases to reach the surface.

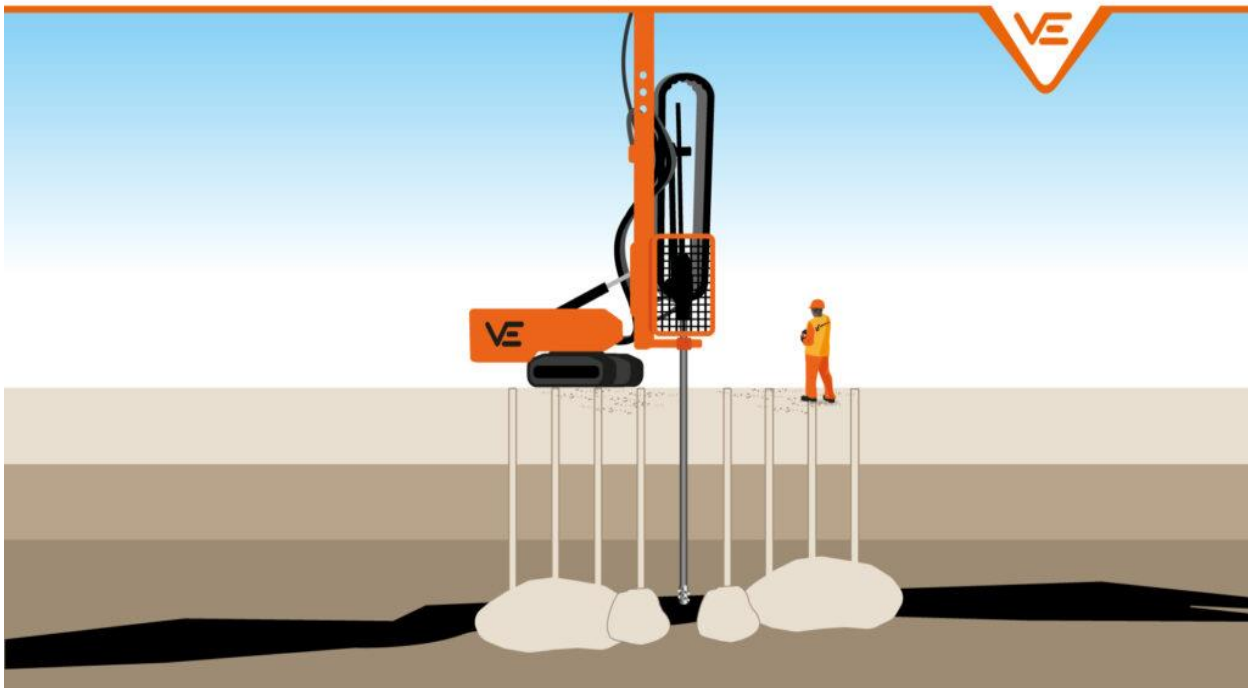
As with all formerly mined sites, there is always a possibility of unknown mineshafts/bell pits/adits and previously formed crown holes being present on site. We would suggest that there is a watching brief whilst undertaking any excavation/earthworks on site and any changes in fill material or colour are noted and investigated.

Appendix 1: Specification

Millwood School Extension

Specification for Consolidation of Mine Workings by Drilling and Grouting

Bulk infill drilling and grouting

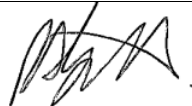


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Control Sheet

This report has been prepared for the sole benefit, use and information of ISG Limited for the purposes set out in the instructions commissioning it. The liability of Van Elle Ltd in respect of the information contained in the report will not extend to any third party.

Prepared by	Paul Grocott	 Signed	Date 18/07/2024
Approved by	Dave Bourne	 Signed	Date 18/07/2024

1.0 Introduction

ISG Limited, in their capacity as Principal Contractor, has instructed Van Elle (VE) to prepare a specification to allow the stabilisation and consolidation of underlying Coal seams and any workings found within them only, at the site of a planned extension at Millwood School, Bury.

The stabilisation of the workings / coal seams will be carried out by Drilling and Grouting, an industry wide term, used to describe the processes identified and described below. Any geological / manmade features above the coal seams will not form part of these works.

Figure 1 shows the area to be treated within the footprint of the development.



Figure 1 – Stabilisation plan.

1.1 Location and Description

The site is located off School Street, Radcliffe, Manchester and it is proposed to build an extension to the existing school building. As part of the pre-construction works a site investigation has been carried out, the result of which shows the potential for shallow mine workings. The site location is shown below on Figure 2.



Figure 2: Site plan

1.2 Ground Conditions & Geology

The site lies within an area underlain by the Pennine Middle Coal Measures, a sequence of strata comprising of interbedded Mudstones, Siltstones, Sandstones and Coal.

The Desk Top Study, Site Investigation and Coal Authority Coal Mining Report all conclude that the area is within a former mining environment.

An extract from the LK Group report shows the Geological map (Sheet 85 Manchester Solid, published 1975, Scale 1:50,000 BGS scale) the geological background below on Figure 3.

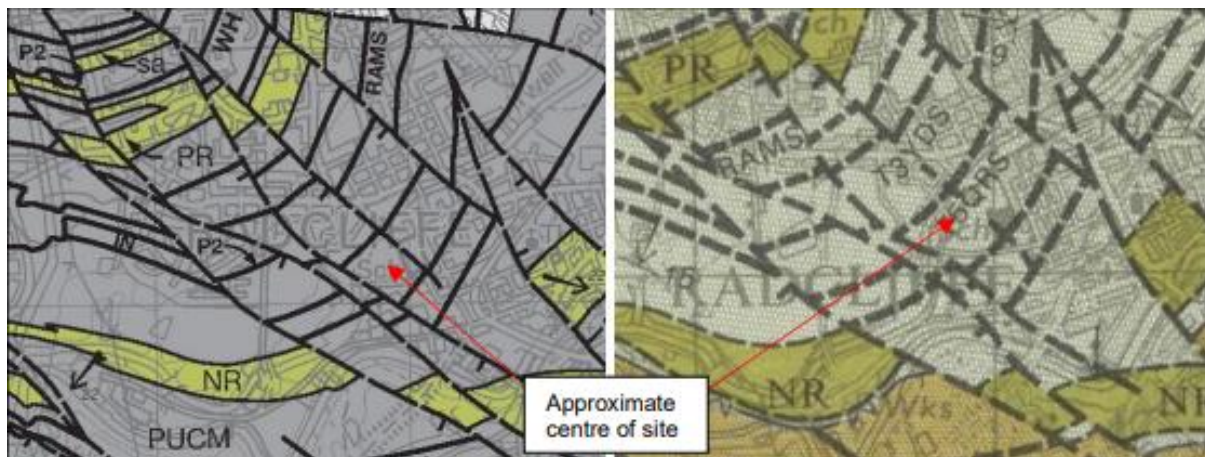


Figure 3: Geological Background

An additional review of the Coal Authorities Online resource (Interactive viewer) provides further evidence to the historical former coal mining area. A screenshot is shown below as Figure 4.

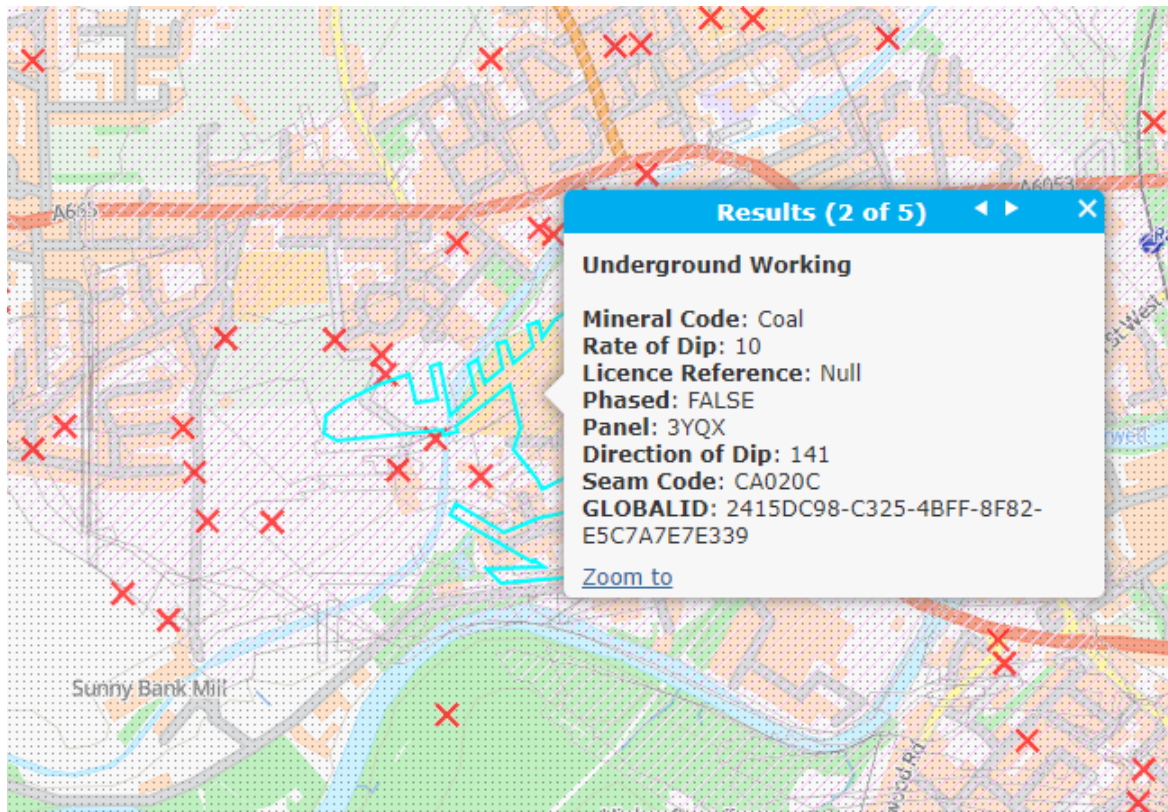


Figure 4: Showing former coal mining area.

1.3 Purpose of the Works

Due to the proposed end use of the site, i.e. Educational Facility it is necessary to ensure that any residual risk from the site's mining past is mitigated and reduced. It would therefore be a requirement of the Local Authority and the Coal Authority that the mine workings are investigated and treated to prevent any potential surface instability in the future. This could be caused by movement from mine entries, collapsed workings (crown holes) or other mining related anomalies.

The treatment of coal seams / workings is required where there is less than ten times seam thickness of rock cover between the top of the worked seam and the base of the proposed piles/rock head.

This 10T rule is an industry adopted common practice based on information and guidance given within Section 5.3 of CIRIA Publication C758D published in 2019.

1.4 Permissions

1.4.1 Coal Authority

A permit to treat workings will need to be obtained from the Coal Authority. A copy of the permit will need to be kept on site by the foreman.

1.4.2 Environment Agency

Any permits required by the EA must be obtained by the Client / Principal Contractor unless otherwise agreed.

1.5 Services

All services must be identified on site and shown to the Foreman and drill crew. The protection, diversion, and if required the reinstatement and repair of any service under CDM fall under the responsibility of the Principal Contractor and permits to work must be issued.

2.0 Specification

2.1 Design

A 6m x 6m grid has been superimposed on the footprint of the proposed building. The treatment boreholes will be drilled to an average depth of 50m below existing ground level (or 1m below seam) to intercept the target seam(s). If any workings are encountered then the grid will be closed to a 4.25m grid.

Treatment will be afforded to the **Coal Seams Only**.

2.2 Supervision

A none working Foreman will be supervising the works for the duration of the works and will be responsible for ensuring the works comply with the specification. The foreman will also complete all the daily records including drill and grout logs, plant daily inspections, daily dairies and the day to day running of the works. The Foreman will also carry out daily briefings, toolbox talks and attend any client requested meetings.

The Foreman will be supported by a visiting Contracts Supervisor, Contracts Manager and Health and Safety Officer.

2.3 Drilling

The drilling of the boreholes will be carried out using a Casagrande C6 XP2 (or similar) using a hydraulically driven rotary percussive drill mast.

The boreholes will advance a nominal 101mm diameter steel casing down to rockhead to ensure the integrity of the borehole through the superficial deposits and to socket into rockhead. Once socketed in, a 72mm diameter borehole will be drilled down into the target seam to allow grouting and consolidation.

The Drilling flush for purposes of logging strata, cooling the drill bit and lubrication will be WATER. This in turn reduces the risk of mine gases being released to LOW as Table 6.2.7. of the Coal Authority Guidance (see below). The rigs will be also fitted with a fully interlocked guard, which will be always in operation that drilling is being carried out.

6.2.7 Table of Risks for Different Drilling Scenarios						
Situation	Air flush	Mist flush	Foam flush	Water flush	Mud flush	Additional controls
- Unworked coal or coal workings - High or unknown risk of hazardous gases being present / created - Occupied property within risk area	HIGH	HIGH / MED'M	HIGH / MED'M	LOW	LOW	- Monitoring at rig and other open holes. - Seal boreholes as soon as possible.
- Unworked coal or coal workings - High or unknown risk of hazardous gases being created or displaced - NO occupied property within risk area	MEDIUM	MED'M / LOW	MED'M / LOW	LOW	LOW	- Monitoring at rig and other boreholes. - Ensure materials are on site to extinguish any heating - Seal boreholes as soon as possible.
- Unworked coal or coal workings - Defined low risk of hazardous gases being present / created - Occupied property within risk area	MEDIUM	LOW	LOW	LOW	LOW	- Monitoring at rig and other open holes. - Seal boreholes as soon as possible.
- Unworked coal or coal workings - Defined low risk of hazardous gases being present / created - No occupied property within risk area	LOW	LOW	LOW	LOW	LOW	- Monitoring at rig and other open holes. - Seal boreholes as soon as possible.

Figure 5: Table 6.2.7 taken from Coal Authority Guidance document 4860 Guidance on Managing Risk of Hazardous Gases when Drilling or Piling near Coal.

2.3.1 Primary Grid

A primary 6m x 6m grid will be drilled with boreholes extending to average depth 50m bgl (or 1m below seam). The grid may be closed locally dependant on workings encountered.

2.3.2 Perimeter

This does not appear necessary since there is no great dip in the workings or significant voids.

2.3.3 Records

Full records shall be maintained during the works, showing job name and location, hole reference number, date, plant in use and crew members, inclination of borehole, daily and cumulative length drilled depth to each major change in stratum, description noting where stratum is broken, details of any voids or suspected workings and depth of completed borehole.

2.3.4 Unknown Mineshafts

Should unknown mineshafts be encountered it will be necessary to probe drill the shaft to work out its diameter. The Client should then record the position via GPS and VE will inform the Coal Authority as the permit agent. The CA will amend the permit to allow treatment.

A shaft safety platform would then need to be mobilised to allow treatment. Methodology and risks will be covered in an amended set of RAMS and Specification.

2.4 Grouting

2.4.1 Materials & Mix

A 12:1 PFA (Pulverised Fuel Ash): OPC cementitious grout will be injected under pressure into each borehole. The water ration should not be more than 40% and flow and bleed tests will need to be carried out each day.

If open voids are encountered the introduction of pea gravel can be used within the grout mix as per CIRIA guidance.

Boreholes recording solid geology i.e. no evidence of workings, will be backfilled with an OPC grout to backfill the borehole and prevent potential mine gases being released to the atmosphere.

2.4.2 Grouting Equipment

The grout will be batched on site using an electric agitator mixer powered by a diesel generator. Constituent materials shall be introduced by a 1 ton bucket attached to a 7m telehandler (or similar) loading shovel and pumped to each treatment borehole using an electric MAPP pump. All plant shall be certified safe and maintained properly throughout the operation.

2.4.3 Water

A source of water will be provided to Van Elle, either from a hydrant with a standpipe or another source with suitable pressure to carry out the works.

2.4.5 Testing

If grout mixing is required, sets of 4 Grout cubes shall be taken and tested 7-, 14- and 28-day intervals to achieve a minimum strength of 1N/mm² after 28 days.

The foreman shall ensure that mixes are tested regularly for flow and bleed using a Colcrete type flowmeter and graduated beaker respectively. Flows should be with the range of 300-600mm, and bleed should be no more than 2% by volume.

2.5 Testing

2.5.1 Test holes

Once an area has been completed, the works in that area will need to be validated by Test Holes. The position of the test holes will normally be dictated within areas of the site where the highest grout takes are recorded.

All test holes will be pressurised to correspond with the amount of overburden (i.e., 10kN/m of overburden) for 2 minutes. The test shall be considered a pass where not more than 1t can be injected, and the pressure drops by no more than 10% for 2 minutes. Drill and Grout records of test holes will be kept, and the position of the test holes will be indicated on the Grout borehole layout plan.

2.5.2 Gas testing

A gas monitor shall be used throughout the consolidation program to monitor for the presence of four harmful gases, carbon monoxide (CO), carbon dioxide (CO₂), hydrogen

sulphide (H₂S) and Methane (CH₄). Levels of airborne Oxygen (O₂) will also be monitored. The gas alarms have visible and aural alarms should concentrations of any of these gases touch pre-determined trigger levels. Records of the gas monitoring shall be kept.

3.0 Reporting

A completion report will be compiled within 28 days of the works being completed. The report will include drilling records, grouting records, testing records and an as-built location plan showing the location of the boreholes and any test holes carried out. It will also summarise total length drilled, and quantities of grout materials.

4.0 References

CIRIA Special Publication C758D

BGS GeoIndex

The Coal Authority Interactive Viewer

Coal Authority Guidance document 4860 Guidance on Managing Risk of Hazardous Gases when Drilling or Piling near Coal.

LK Group Ground Investigation Report Reference: LKC 23 1383 Dated: September 2023

LK Group CMRA Report Reference: LKC 23 1383 Dated: August 2023

Appendix 1

Sample Drilling & Grouting Records

CON 10 R2 31/03/15



Kirkby Lane, Pinxton, Nottinghamshire NG16 6JA
Telephone: (01773) 580580 Fax: (01773) 862100
Website: www.van-elle.co.uk E-mail: info@van-elle.co.uk

Open Hole Drillers Log

[illegible]



DAILY & ACCUMULATIVE GROUTING RETURN

Job No. Client Site Address

HOLE REF.	DEPT H (M)	ANGLE/ PRESSURE	BRIEF LOG OF HOLE	QUANT OF GROUT (T)	OPC	PFA	SAND	PEA GRAVEL		CEMENT	PFA	SAND	PEA GRAVEL
									Today's Deliveries				
									Previous Deliveries				
									Total Deliveries				
									Total Used				
									Stock on Site				
										OPERATIVES ON SITE			
										REMARKS			
										I CONFIRM THIS IS A TRUE RECORD VAN ELLE OPERATIVE SIGNATURE			
										 CLIENTS SIGNATURE			
													
										DATE			
TOTAL HOLES GROUTED TODAY		TODAY'S TOTAL GROUT											
PREVIOUS TOTAL		PREVIOUS TOTAL											
TOTAL TODATE		TOTAL GROUTING											

Appendix 2: Drillers Logs

Open Hole Drillers Log

[illegible]

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed	Today	2	100	20	
						Previous	0	0	0	
						To Date	2	100	20	

I confirm this is a true record.
 Van Elle operative name M. Cole

Drill hole Nos. checked Yes ☒ No ☐
 Hole Depth checked Yes ☒ No ☐
 SIGNED [Signature]
 Dated 23/8/24

Client's Name D. Cleland
 Client's position Site Manager
 Signature [Signature]
 Dated 30/08/24



Kirkby Lane, Pinxton, Nottinghamshire NG16 6JA
 Telephone: (01773) 580580 Fax: (01773) 862100
 Website: www.van-elle.co.uk E-mail: info@van-elle.co.uk

Open Hole Drillers Log

* NO GAS RECORDED.

Site: MILLWOOD SCHOOL.			Sheet: 1 of 1		
Rig: CG XP 21855		Crew: M. CAE J. OGBOY.		Date: 28/8/24.	
Hours on Site:			Travelling Time:		
BH	Depth	Strata Description	BH	Depth	Strata Description
M25	0-21	OVERBURDEN.	M15	0-20	OVERBURDEN.
	21-41	MUDSTONE/SANDSTONE	O15	20-39.5	MUDSTONE/SANDSTONE
	41-43.5	DARK M/S COAL BANDS.		39.5-42.	DARK M/S COAL BANDS.
	43.5-50	MUDSTONE/SANDSTONE.		42-50.	MUDSTONE/SANDSTONE.
		10M CASING.			10M CASING.
M23	0-20.5	OVERBURDEN			
M21	20.5-40.5	MUDSTONE/SANDSTONE			
	40.5-43	DARK M/S COAL BANDS.			
	43-50	MUDSTONE/SANDSTONE.			
		10M CASING.			
M19	0-20	OVERBURDEN			
M17	20-40	MUDSTONE/SANDSTONE			
	40-42.5	DARK M/S COAL BANDS.			
	42.5-50	MUDSTONE/SANDSTONE.			
		10M CASING.			

Casing/Water Level Details

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed	Today				
						Previous				
						To Date				

I confirm this is a true record.
 Van Elle operative name: M. CAE.

Drill hole Nos. checked Yes ☒ No ☐
 Hole Depth checked Yes ☒ No ☐
 SIGNED: [Signature]
 Dated: 28/8/24.

Client's Name: D. [Signature]
 Client's position: [Signature]
 Signature: [Signature]
 Dated: 30/08/24.



Kirkby Lane, Pinxton, Nottinghamshire NG16 6JA
Telephone: (01773) 580580 Fax: (01773) 862100
Website: www.van-elle.co.uk E-mail: info@van-elle.co.uk

Open Hole Drillers Log

NO GAS RECORDED.

Site: Millwood School.			Sheet: 1 of 1		
Rig: CG XP 2 18SS		Crew: M. CAE J. OGDEN.		Date: 29/8/24.	
Hours on Site:			Travelling Time:		
BH	Depth	Strata Description	BH	Depth	Strata Description
013	0-20	OVERBURDEN			
M13	20-39	MUDSTONE SANDSTONE.			
K13	39-42.5	DARK M/S COAL BANDS.			
K15	42.5-50	MUDSTONE SANDSTONE.			
		10M CASING.			
K17	0-20	OVERBURDEN.			
K19	20-40	MUDSTONE SANDSTONE.			
	40-42.5	DARK M/S COAL BANDS.			
	42.5-50	MUDSTONE SANDSTONE.			
		10M CASING.			
K21	0-20.5	OVERBURDEN			
	20.5-40.5	MUDSTONE SANDSTONE.			
	40.5-43	DARK M/S COAL BANDS.			
	43-50	MUDSTONE SANDSTONE.			
		10M CASING.			

Casing/Water Level Details

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed	Today	7	350	70.	
						Previous	9	450	90.	
						To Date	16.	800.	160.	

I confirm this is a true record.

Van Elle operative name MATT CAE

Drill hole Nos. checked Yes ☒ No ☐

Hole Depth checked Yes ☒ No ☐

SIGNED

Dated 29/8/24.

Client's Name D. Delaney

Client's position Site Manager

Signature [Signature]

Dated 30/08/24



Kirkby Lane, Pinxton, Nottinghamshire NG16 6JA
 Telephone: (01773) 580580 Fax: (01773) 862100
 Website: www.van-elle.co.uk E-mail: info@van-elle.co.uk

Open Hole Drillers Log

* no gas recorded .

Site: MILLWOOD SCHOOL .			Sheet: 1 of 1		
Rig: CB XP 2 1855		Crew: M. CAE		J. OGDEN .	
Date: 30/8/24 .					
Hours on Site:			Travelling Time:		
BH	Depth	Strata Description	BH	Depth	Strata Description
K23	0-21	OVERBURDEN			
K25	21-41	MUDSTONE / SANDSTONE .			
I25	41-43.5	DARK M/S COAL BANDS .			
I23	43.5-50	MUDSTONE / SANDSTONE .			
		10M CASING .			
I19	0-20.5	OVERBURDEN			
I17	20.5-40.5	MUDSTONE / SANDSTONE			
	40.5-43	DARK M/S COAL BANDS .			
	43-50	MUDSTONE / SANDSTONE .			
		10M CASING .			
I15	0-20	OVERBURDEN			
	20-39.3	MUDSTONE / SANDSTONE			
	39.3-42.5	DARK M/S COAL BANDS			
	42.5-50	MUDSTONE / SANDSTONE .			
		10M CASING .			

Casing/Water Level Details

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed	Today				
						Previous	7	350	70	
						To Date	16	800	1600	
							23	1150	230	

I confirm this is a true record.
 Van Elle operative name: MATT CAE

Drill hole Nos. checked Yes ☒ No ☐
 Hole Depth checked Yes ☒ No ☐

SIGNED [Signature]
 Dated 30/8/24.

Client's Name S. de la...
 Client's position Site Manager
 Signature [Signature]
 Dated 30/08/24

Kirkby Lane, Pinxton, Nottinghamshire NG16 6JA
Telephone: (01773) 580580 Fax: (01773) 862100
Website: www.van-elle.co.uk E-mail: info@van-elle.co.uk

*no gas recorded.

Site: MILLWOOD SCHOOL ,					Sheet: 1 of														
Rig: CG XP 2 1855			Crew: M. COE J. OGDEN .			Date: 2/9/24													
Hours on Site:					Travelling Time:														
BH		Depth		Strata Description		BH		Depth		Strata Description									
I13		0 - 20		WGLBURDEN															
M11		20 - 39		MUDSTONE SANDSTONE															
		39 - 41.5		DARK M/S COAL BANDS															
		41.5 - 50		MUDSTONE SANDSTONE .															
				10M CASING .															
M9		0 - 20		WGLBURDEN															
		20 - 40		MUDSTONE SANDSTONE															
		40 - 42.5		DARK M/S COAL BANDS .															
		42.5 - 50		MUDSTONE SANDSTONE .															
				10M CASING .															
M7		0 - 20		WGLBURDEN															
M5		20 - 41		MUDSTONE SANDSTONE															
M3		41 - 43.5		DARK M/S COAL BANDS .															
N3		43.5 - 50		MUDSTONE SANDSTONE .															
				10M CASING .															
Casing/Water Level Details																			
BH		Casing		Water		Totals		BH		Drill		Case		Install					
		Dia		Depth		Strike		Rise		Sealed		Today							
												7		350		70.			
												Previous		23		1150		230.	
												To Date		30		1500		300	
I confirm this is a true record. Van Elle operative name: M. COE .												Client's Name: N. KILL							
Drill hole Nos. checked Yes ☒ No ☐												Client's position: SSA							
Hole Depth checked Yes ☒ No ☐												Signature: L. TIL							
SIGNED: [Signature]												Dated: 09/09/24							
Dated: 2/9/24																			

Kirkby Lane, Pinxton, Nottinghamshire NG16 6JA
Telephone: (01773) 580580 Fax: (01773) 862100
Website: www.van-elle.co.uk E-mail: info@van-elle.co.uk

* no gas recorded.

[illegible]



Kirkby Lane, Pinxton, Nottinghamshire NG16 6JA
Telephone: (01773) 580580 Fax: (01773) 862100
Website: www.van-elle.co.uk E-mail: info@van-elle.co.uk

Open Hole Drillers Log

* no gas recorded.

Site: <u>MILWOOD SCHOOL.</u>			Sheet: <u>1</u> of <u>1</u>		
Rig: <u>CL XP 2 1855</u>		Crew: <u>M. CAE</u> <u>J. OGDEN.</u>		Date: <u>4/9/24.</u>	
Hours on Site:			Travelling Time:		
BH	Depth	Strata Description	BH	Depth	Strata Description
I11	0-20	OVERBURDEN			
I9.	20-41	MUDSTONE / SANDSTONE			
	41-43.5	DARK M/S COAL BANDS.			
	43.5-50	MUDSTONE / SANDSTONE.			
		10M CASING.			
I7	0-20	OVERBURDEN.			
I5	20-40	MUDSTONE / SANDSTONE			
I3	40-42.5	DARK M/S COAL BANDS.			
	42.5-50	MUDSTONE / SANDSTONE.			
		10M CASING.			
G25	0-19	OVERBURDEN.			
G23	19-39	MUDSTONE / SANDSTONE			
	39-41	DARK M/S COAL BANDS.			
	41-50	MUDSTONE / SANDSTONE			
		10M CASING.			

Casing/Water Level Details

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed	Today				
						Previous				
						To Date				

I confirm this is a true record.

Van Elle operative name.....

Drill hole Nos. checked Yes ☐ No ☐

Hole Depth checked Yes ☐ No ☐

SIGNED.....

Dated.....

Client's Name.....

Client's position.....

Signature.....

Dated.....

Kirkby Lane, Pinxton, Nottinghamshire NG16 6JA
Telephone: (01773) 580580 Fax: (01773) 862100
Website: www.van-elle.co.uk E-mail: info@van-elle.co.uk

* no gas recorded.

[illegible]

Open Hole Drillers Log

[illegible]

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed	Today	7	350	70	
						Previous	51	2550	510.	
						To Date	58	2900	580.	

I confirm this is a true record.
 Van Elle operative name..... *M. Cat*

Drill hole Nos. checked Yes ☒ No ☐
 Hole Depth checked Yes ☒ No ☐
 SIGNED..... *[Signature]*
 Dated..... *6/9/24.*

Client's Name..... *ISS*
 Client's position..... *2550/*
 Signature..... *[Signature]*
 Dated..... *06/09/24*

Kirkby Lane, Pinxton, Nottinghamshire NG16 6JA
Telephone: (01773) 580580 Fax: (01773) 862100
Website: www.van-elle.co.uk E-mail: info@van-elle.co.uk

~~5~~ no gas recorded.

Site: MILLWOOD SCHOOL.					Sheet: 1 of 1				
Rig: CO XP 2 18SS			Crew: M. CAE		J. OGDEN.		Date: 11/9/24.		
Hours on Site:					Travelling Time:				

BH	Depth	Strata Description	BH	Depth	Strata Description
C9	0-20	OVERBURDEN	TH1	0-19	OVERBURDEN
C7	20-41	MUDSTAE/SANDSTAE		19-39	MUDSTAE/SANDSTAE
C5	41-42	DARK M/S COAL BANDS.		39-42.5	DARK M/S COAL BANDS
C3	42-50	MUDSTAES/SANDSTAE		42.5-50	MUDSTAE/SANDSTAE
		10M CASING.			10M CASING.
015	0-20	OVERBURDEN	TH2	0-20	OVERBURDEN
	20-39	MUDSTAE/SANDSTAE		20-41	MUDSTAE/SANDSTAE
	39-42.5	DARK M/S COAL BANDS		41-43.5	DARK M/S COAL BANDS
	42.5-50	MUDSTAES/SANDSTAE		43.5-50	MUDSTAE/SANDSTAE
		10M CASING.			10M CASING.
	* 015	WAS MISSING FROM LOGS.			

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed	Today				
							7	350	70	
						Previous	74	3700	740	
						To Date	81	4050	810	

I confirm this is a true record. Van Elle operative name: M. CAE				Client's Name.....			
Drill hole Nos. checked Yes ☒ No ☐				Client's position.....			
Hole Depth checked Yes ☒ No ☐				Signature.....			
SIGNED.....				Dated..... 11/9/24			
Dated..... 11/9/24							

* no gas recorded.

Casing/Water Level Details

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed	Today	8	400	80	
						Previous	66	3300	660	
						To Date	74	3700	740	

I confirm this is a true record.
 Van Elle operative name M. cae

Drill hole Nos. checked Yes ☒ No ☐
 Hole Depth checked Yes ☒ No ☐
 SIGNED [Signature]
 Dated 10/9/24

Client's Name _____
 Client's position _____
 Signature [Signature]
 Dated 10/9/24

* No gas recorded.

[illegible]

Appendix 3:

Grout Logs

DAILY & ACCUMULATIVE GROUTING RETURN

12-1 MIX

Job No. 233575 Client ISG Site Address MULWOOD SCHOOL

HOLE REF.	DEPT H (M)	ANGLE/PRESSURE	BRIEF LOG OF HOLE	QUANT OF GROUT (T)	OPC	PFA	SAND	PEA GRAVEL	Today's Deliveries	CEMENT	PFA	SAND	PEA GRAVEL
M25	SOM		COAL.	0.39.	0.03	0.36				0	0		
M23	"		"	"	"	"			Previous Deliveries	4.5.	38.163		
M21	"		"	"	"	"			Total Deliveries	4.5	38.163		
M19	"		"	"	"	"			Total Used				
M17	"		"	"	"	"			Stock on Site				
M15	"		"	"	"	"			OPERATIVES ON SITE				
M13	"		"	"	"	"			M.CAE J. OGDEN.				
O13	"		"	"	"	"			REMARKS				
O15	"		"	"	"	"			Flow TEST 450mm CUBES TAKEN				
O17	"		"	"	"	"			Bleed test 96%				
O19.	"		"	"	"	"			I CONFIRM THIS IS A TRUE RECORD				
M11	"		"	"	"	"			VAN ELLE OPERATIVE SIGNATURE				
M9	"		"	"	"	"			CLIENTS SIGNATURE				
13	TOTAL HOLES GROUTED TODAY		TODAY'S TOTAL GROUT	5.07.	0.39	4.68							
0	PREVIOUS TOTAL		PREVIOUS TOTAL	0	0	0							
13.	TOTAL TODATE		TOTAL GROUTING	5.07.	0.39	4.68			DATE 11/9/24				

DAILY & ACCUMULATIVE GROUTING RETURN

12-1 MIX

Job No. 233575 Client ISG Site Address MILWOOD SCHOOL

HOLE REF.	DEPT H (M)	ANGLE/PRESSURE	BRIEF LOG OF HOLE	QUANT OF GROUT (T)	OPC	PFA	SAND	PEA GRAVEL		CEMENT	PFA	SAND	PEA GRAVEL
M7	50M		COAL	0.89	0.03	0.36			Today's Deliveries	0	0		
M5	11								Previous Deliveries	4.5	38.163		
M3	11								Total Deliveries	4.5	38.163		
N7	11		* ALL HAES TAKEN						Total Used				
N5	11		THE SAME						Stock on Site				
N3	11								OPERATIVES ON SITE				
K3	11								SAME				
K5	11												
K7	11								REMARKS				
K9	11								SAME				
K11	11												
K13	11								I CONFIRM THIS IS A TRUE RECORD VAN ELLE OPERATIVE SIGNATURE				
K15	11								CLIENTS SIGNATURE				
13	TOTAL HOLES GROUTED TODAY		TODAY'S TOTAL GROUT	5.07	0.39	4.68							
13	PREVIOUS TOTAL		PREVIOUS TOTAL	5.07	0.39	4.68							
26	TOTAL TODATE		TOTAL GROUTING	10.14	0.78	9.36			DATE 11/9/24				

DAILY & ACCUMULATIVE GROUTING RETURN

Job No. 233575..

Client ISG

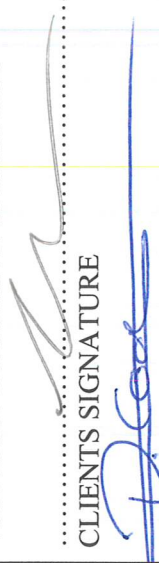
Site Address MILLWOOD SCHOOL

HOLE REF.	DEPT H (M)	ANGLE/PRESSURE	BRIEF LOG OF HOLE	QUANT OF GROUT (T)	OPC	PFA	SAND	PEA GRAVEL		CEMENT	PFA	SAND	PEA GRAVEL
K17	5.0M		COAL.	0.39.	0.03	0.36			Today's Deliveries				
K19									Previous Deliveries				
K21									Total Deliveries	4.5	38.163		
K23			ALL HAES TAKEN						Total Used				
K25			THE SAME.						Stock on Site				
I25									OPERATIVES ON SITE				
I23									SAME				
I21													
I19									REMARKS				
I17									SAME				
I15													
I13									I CONFIRM THIS IS A TRUE RECORD				
I11									VAN ELLE OPERATIVE SIGNATURE				
13	TOTAL HOLES GROUTED TODAY		TODAY'S TOTAL GROUT	5.07	0.39	4.68			CLIENTS SIGNATURE				
26	PREVIOUS TOTAL		PREVIOUS TOTAL	10.14.	0.78	9.36							
39	TOTAL TODATE		TOTAL GROUTING	15.21	1.17	14.04			DATE 11/9/24.				

DAILY & ACCUMULATIVE GROUTING RETURN

12-1 MIX

Job No. 233575 Client ISG Site Address MILLWOOD SCHOOL

HOLE REF.	DEPT H (M)	ANGLE/PRESSURE	BRIEF LOG OF HOLE	QUANT OF GROUT (T)	OPC	PFA	SAND	PEA GRAVEL		CEMENT	PFA	SAND	PEA GRAVEL
I9	50M		cont.	0.39	0.03	0.36			Today's Deliveries				
I7									Previous Deliveries				
IS									Total Deliveries	4.5	38.163		
IS			*ALL HOLES TAKEN SAME.						Total Used				
G3									Stock on Site				
G-5									OPERATIVES ON SITE				
G-7									SAME				
G-9													
G-11													
G-13													
G-15													
G-17													
G-19													
13	TOTAL HOLES GROUTED TODAY		TODAY'S TOTAL GROUT	5.07	0.39	4.68			I CONFIRM THIS IS A TRUE RECORD VAN ELLE OPERATIVE SIGNATURE 				
39	PREVIOUS TOTAL		PREVIOUS TOTAL	15.21	1.17	14.04							
52	TOTAL TODATE		TOTAL GROUTING	20.28	1.56	18.72							
									DATE	11/9/24			

DAILY & ACCUMULATIVE GROUTING RETURN

12-1 MIX

Job No. 238875 Client ISG Site Address MILLWOOD SCHOOL

HOLE REF.	DEPT H (M)	ANGLE/PRESSURE	BRIEF LOG OF HOLE	QUANT OF GROUT (T)	OPC	PFA	SAND	PEA GRAVEL		CEMENT	PFA	SAND	PEA GRAVEL
E5	5.0M		CONCL.	0.39.	0.03	0.36			Today's Deliveries				
E3									Previous Deliveries				
C3									Total Deliveries	4.5	38.163		
C5			*ALL HUES						Total Used				
C7			TIAMEN SAME						Stock on Site				
C9									OPERATIVES ON SITE				
C11									SAME				
C13													
C15									REMARKS				
C17									SAME				
C19													
C21									I CONFIRM THIS IS A TRUE RECORD VAN ELLE OPERATIVE SIGNATURE				
C23													
13	TOTAL HOLES GROUTED TODAY		TODAY'S TOTAL GROUT	5.07	0.39	4.68			CLIENTS SIGNATURE				
65	PREVIOUS TOTAL		PREVIOUS TOTAL	25.35	1.95	23.40							
78	TOTAL TODATE		TOTAL GROUTING	30.42	2.34	28.08			DATE 11/9/24				

DAILY & ACCUMULATIVE GROUTING RETURN

12-1 MIX

Job No. 283575 Client 156 Site Address MILLWOOD SCHOOL

HOLE REF.	DEPT H (M)	ANGLE/PRESSURE	BRIEF LOG OF HOLE	QUANT OF GROUT (T)	OPC	PFA	SAND	PEA GRAVEL	Today's Deliveries	Previous Deliveries	Total Deliveries	CEMENT	PFA	SAND	PEA GRAVEL
G-21	50M		COAL.	0.39	0.03	0.36									
G-23															
G-25												4.5	38.63		
E-25			* ALL HAZ												
E-23			TAKEN SAME.												
E-21															
E-19															
E-17															
E-15															
E-13															
E-11															
E-9															
E-7															
13	TOTAL HOLES GROUTED TODAY		TODAY'S TOTAL GROUT	5.07	0.39	4.68									
52	PREVIOUS TOTAL		PREVIOUS TOTAL	20.28	1.56	18.72									
65	TOTAL TODATE		TOTAL GROUTING	25.35	1.95	23.40									
OPERATIVES ON SITE SAME SAME I CONFIRM THIS IS A TRUE RECORD VAN ELLE OPERATIVE SIGNATURE CLIENTS SIGNATURE DATE 11/9/24															

DAILY & ACCUMULATIVE GROUTING RETURN

Job No. 233575

Client ISG

Site Address MILWOOD SCHOOL

12-1 MIX

HOLE REF.	DEPT H (M)	ANGLE/PRESSURE	BRIEF LOG OF HOLE	QUANT OF GROUT (T)	OPC	PFA	SAND	PEA GRAVEL	Today's Deliveries	CEMENT	PFA	SAND	PEA GRAVEL
C25	50M		COAL	0.39	0.03	0.36			Previous Deliveries				
TH1	"	2 BAR	COAL	0.39	0.03	0.36			Total Deliveries	4.5	38.163		
TH2	"	2 BAR	COAL	0.39	0.03	0.36			Total Used				
									Stock on Site				
									OPERATIVES ON SITE				
									same				
									same				
									I CONFIRM THIS IS A TRUE RECORD VAN ELLE OPERATIVE SIGNATURE				
									CLIENTS SIGNATURE				
3	TOTAL HOLES GROUTED TODAY		TODAY'S TOTAL GROUT	1.17	0.09	1.08							
78	PREVIOUS TOTAL		PREVIOUS TOTAL	30.42	2.34	28.08							
81	TOTAL TODATE		TOTAL GROUTING	31.59	2.43	29.16			DATE 11/9/24				

Appendix 4:

Drilling Summary

Appendix 5:

Grouting Summary

Appendix 6:

Coal Authority Permit & Closure Form



Permit Ref.	28749	Project / Site Location	Millwood School, School Street, Radcliffe, Bury, M26 3BW
-------------	--------------	-------------------------	--

Please supply all relevant documents, including this completed form within 3 months of the permitted works being completed.

Where relevant the report should include; borehole logs and details of mine or mine entry treatment works carried out (incl. engineering drawings, grout takes etc.) and a scaled site layout plan (correlated to O.S N' Grid) showing all relevant mine entry positions, coal seams, voids and broken ground proved by the works.

Summary of works**Start date**

27/8/2024

Finish date

11/9/2024

Have any variations occurred? ☒ No ☐ Yes **If so was the Authority notified?** ☐ No ☐ Yes

Please describe;

Did if any of the following incidents occur?

- ☐ Spontaneous combustion ☐ Water emission ☐ Gas emission (elevated or above action levels)
☐ Geotechnical instability ☐ Legal issues incl. damage or potential claims ☒ **None**

If yes, please detail each item;

Were any of the following encountered? Please give a brief summary of the works undertaken.

- ☒ Intact coal only ☐ Broken ground ☐ Backfilled ground ☐ Voids

Description;

COAL was only found as thin solid bands within a dark black MUDSTONE

Will further works be necessary that require a Permit? ☒ No ☐ Yes

If yes, please describe, including any recommendations;

Name: Paul Grocott	Email: paul.grocott@van-elle.co.uk
Company: Van Elle Limited	Tel: 01773 580580



The Coal
Authority

Permit to Enter or Disturb Coal Authority Interests

Permit 28749

Name and Address of Permit Holder:

Bury Council
Land and Property
3 Knowsley Place
Duke Street
Bury
BL9 0EJ

Site Location:

Millwood School
School Street
Radcliffe
Bury
M26 3BW

This certificate hereby grants the above named Permit Holder a Permit to carry out:-

Treatment of shallow mine workings by drilling and grouting to 50m on 6m grid within the Authority's interests at the identified site location above as shown on the Grant Permit Boundary (overleaf) for the period of **12 months** from the granted date shown below. *The granting of this Permit does not constitute advice given by the Authority in relation to the proposed operations. It is the Permit Holder's responsibility to obtain appropriate health, safety, environmental, technical and legal advice.*

Conditions:

- *Manned entry (i.e.) into mine entries/workings) is strictly prohibited.*
- *Water flush*
- *Gas Monitoring CO, CH₄, CO₂, O₂, H₂S at borehole and rig*
- *Operators undertaking the work must be in possession of this certificate and the Permit boundary plan at the time of works*
- *Appropriate borehole sealing without delay and to withstand site level changes*

Signed: Izaak Hayes Granted Date: 08/08/2024

For and on behalf of The Coal Authority

Nominated Representative: Izaak Hayes, Permitting Manager;

The Coal Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG

Tel: 01623 637147; E-Mail: permissions@coal.gov.uk



The Coal
Authority

Granted Permit Boundary

Permit Ref: 28749

Permit Boundary:



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